Name:

ml1112paper: Solve by factoring (v8)

1. Solve the equation

$$x^2 - 14x + 49 = 0$$

$$(x - 7)(x - 7) = 0$$
$$x = 7$$
$$x = 7$$

2. Solve the equation

$$x^2 + 9x + 18 = 0$$

$$(x + 3)(x + 6) = 0$$
$$x = -6$$
$$x = -3$$

3. Solve the equation

$$8x^2 - 4x - 69 = 7x^2 - 2x - 6$$

$$x^2 - 2x - 63 = 0$$
$$(x - 9)(x + 7) = 0$$
$$x = -7$$
$$x = 9$$

4. Solve the equation

$$6x^2 + 16x + 22 = 5x^2 + 6x - 3$$

$$x^2 + 10x + 25 = 0$$
$$(x + 5)(x + 5) = 0$$
$$x = -5$$
$$x = -5$$

5. Solve the equation

$$5x^2 + 3x - 14 = 0$$

$$(5x - 7)(x + 2) = 0$$
$$x = -2$$
$$x = \frac{7}{5}$$

6. Solve the equation

$$3x^2 + 25x - 18 = 0$$

$$(3x - 2)(x + 9) = 0$$
$$x = -9$$
$$x = \frac{2}{3}$$

7. Solve the equation

$$11x^2 + 30x + 21 \;=\; 4x^2 - 2x + 5$$

$$7x^2 + 32x + 16 = 0$$
$$(7x + 4)(x + 4) = 0$$
$$x = -4$$
$$x = \frac{-4}{7}$$

8. Solve the equation

$$6x^2 + 15x - 9 \;=\; x^2 - 3x - 1$$

$$5x^2 + 18x - 8 = 0$$
$$(5x - 2)(x + 4) = 0$$
$$x = -4$$
$$x = \frac{2}{5}$$